



UNION CARBIDE CORPORATION P.O. BOX 1029, GRAND JUNCTION, COLORADO 81502
METALS DIVISION TELEPHONE: (303) 245-3700

December 15, 1983

RECEIVED
MAY 22 1989

Pam Grubaugh-Littig
State of Utah
Oil, Gas, and Mining
4241 State Office Building
Salt Lake City, UT 84114

DIVISION OF
OIL, GAS & MINING

Re: Bond Estimates
LaSal-Snowball ACT/037/026
Hecla ACT/037/043
Wilson-Silverbell ACT/037/027

Dear Pam:

In response to your recent letter of November 8, 1983 regarding questions on Union Carbide's recent bond estimate submittals, we are completely re-evaluating our permit acreage requirements, final abandonment and reclamation procedures and the estimated costs. The new estimates show more specific detail, changes in final reclamation method and other considerations that will reflect differences and changes from the previous submittals. Kindly, please disregard the past bond estimates and base your evaluation on the new estimates enclosed: LaSal-Snowball - ACT/037/026, Hecla - ACT/037/043, Wilson-Silverbell - ACT/037/037. The Deremo-Peterson and Redd Blk four revisions will arrive shortly.

All revised estimates are being made for five years with equipment costs and times derived from the "Rental Rate Blue Book" and the "Caterpillar Performance Handbook." Other costs not covered in the above were determined from local contractors' estimates or prices supplied by O.G.M.

I am enclosing with each bond estimate submittal, site specific assumptions, conditions, or factors that went into these new evaluations.

If you have further questions, please do not hesitate to contact Bruce Greene at the location for clarification or assistance. I have enjoyed working with you and hope that the work with O.G.M. has proved fruitful in resolving problems of the past.

Sincerely,

Kent G. Dahlquist
Mine Engineer

KGD/jo
Enclosures

BOND ESTIMATE

UNION CARBIDE - HECLA SHAFT ACT/037/043

12/15/83

35 Acres

A. Removal of Office, Shop, Compressor Building, Headframe, etc. (dismantle and bury on site)			
D9 cat w/ripper	1 wk	@\$4,105/wk.	\$ 4,100
40 ton Linkbelt HTC 1040	1 wk	@\$3,915/wk.	3,900
20 yd. ³ end dump truck	2 wks	@\$1,470/wk.	2,900
5 yd. ³ 9800 Cat loader	2 wks	@\$1,995/wk.	4,000
Tractor & 25 ton Lowboy	60 hrs	@\$55.55/hr.	3,300
Labor	840 hrs	@\$15/hr.	12,600
Total			<u>\$ 30,800</u>
B. Removal of Trash and Extraneous Debris (Haul to LaSal landfill)			
20 yd. ³ end dump truck	2 dys.	@\$370	\$ 700
3½ yd. ³ 966 Cat loader	2 dys.	@\$630	1300
Labor	48 hrs.	@\$15/hr.	700
Total			<u>\$ 2,706</u>
C. Foundation Elimination, Break-up and Burial			
D9 Cat w/ripper	½ wk.	@\$4,105/wk.	\$ 2,100
Compressor & jackhammer	16 hr.	@\$56/hr.	900
Labor	16 hr.	@\$15/hr.	200
Total			<u>\$ 3,200</u>
D. Restocking of unused fuels, oils, etc. (Contingency Cost)			<u>\$ 500</u>
E. Pond Area: contouring, excavating pond bottom and dumping down mine shaft - 6.6 acres			
5 yd. ³ 980D Cat loader	1 wk.	@\$1,995/wk.	\$ 2,000
20 yd. ³ end dump truck	1 wk.	@\$1,470/wk.	1,500
146 Cat grader	3/5 wk.	@\$2,815/wk.	1,700
D9 Cat w/ripper	2/5 wk.	@\$4,105/wk.	1,600
Labor	120 hrs.	@\$15.00	1,800
Total			<u>\$ 8,600</u>

F. Contouring Dumps, Surface Plant Area and Roads
Waste Dumps, 11.2 acres @\$1,800

\$ 20,200

<u>Cost Per Acre</u>		
D 9 Cat	1/5 wk. @\$4,105/wk.	\$ 800
146 Cat Grader	1/5 wk. @\$2,815/wk.	600
Labor	24 hrs. @\$15/hr.	400
		<u>\$ 1,800/acre</u>

Plant Area and Roads 17.2 acres @\$85

1,500

<u>Cost Per Acre</u>		
146 Grader	1 hr. @\$2,815/wk. or \$70/hr.	\$ 70
Labor	1 hr. @\$15/hr.	15
		<u>\$ 85/acre</u>

Total Contouring & Grading \$ 21,700

G. Topsoil Placement and Grading on Waste Dumps,
11.2 acres @\$1,400

\$ 15,700

<u>Cost Per Acre</u>		
621B Cat Scraper	6 hr. @\$3,905/wk.	\$ 600
D9 Cat	2 hr. @\$4,105/wk.	200
146 Cat Grader	6 hr. @\$2,815/wk.	400
Labor	14 hr. @\$15/hr.	200
		<u>\$ 1,400</u>

H. Capping of Vertical Shafts, 6 each @\$1,200 ea.

\$ 7,200

<u>Cost Per Shaft</u>		
Delivered concrete		
Moab, Utah	4 yds.3 @\$65/yd.3	\$ 300
Form materials, etc		500
Labor	16 hrs. @\$15/hr.	200
146 Cat Grader	2 hrs. @\$3,905/wk.	200
		<u>\$ 1,200</u>

I. Stabilization, Reseeding of ponds, waste
dumps, plant area, etc. i.e., all acres: 35 acres

\$ 2,200

<u>Cost Per Acre</u>		
62 Hp Massey Ferguson Tractor		
w/operator	3 hrs. @\$100/day	\$ 38
Rangeland drill,		
drag	3 hrs. @\$7/day	4
Seeds		20
		<u>\$ 62/acre</u>

J. Monitoring, sampling and necessary testing	<u>\$ 15,000</u>
Sub Total	<u>\$ 107,100</u>
K. Contingency, 10%	<u>\$ 10,700</u>
GRAND TOTAL	<u>\$ 117,800</u>

Conditions:

1. Hourly costs are based on weekly rates because equipment would be used on all phases of reclamation.
2. Dollar amounts are rounded to the nearest hundred.
3. All buildings, structures, etc remaining after cessation of mining activities will have no salvageable value and be demolished and buried on site.
4. It is felt that 35 acres of disturbance will be required and that the permit and bond be set for that amount.
5. New stabilization and reseeding costs are based on the conditions of the original permit application and do not reflect either fertilization or mulching. If the test plots or new information indicate a significant change in final re-seeding techniques, changes will be made at a later date.
6. Vertical shafts will be reclaimed by inserting a steel support framework and pouring an 18" to 24" concrete plug.
7. Monitoring costs are for vegetation and any augmentation that may be required.
8. Variances from past estimates are due to revised cost estimates, revised final reclamation procedures, and fewer disturbed acres.
9. The contingency amount in item K is being calculated at 10% as required, rather than the 15% rate as in previous estimates.

Prepared by: K. G. Dahlquist
B. A. Green

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B. A. Green

BOND ESTIMATE

Union Carbide - Hecla Shaft

A.	Removal of Office, Shop, Compressor Building, Headframe, etc.	\$50,000.00
B.	Removal of Trash and Extraneous Debris	2,000.00
C.	Foundation Elimination, Break-up or Burial	2,000.00
D.	Removal of Hazardous Materials	500.00
E.	Pond Area: includes regrading and burial, if necessary of 6.6 acres @ <u>\$2,000/acre</u>	13,200.00
F.	Regrading and Topsoil Replacement	
	Waste Dump Areas 11.2 acres @ \$2,000/acre	22,400.00
	Other <u>17.2 acres @ <u>\$250/acre</u></u>	4,275.00
G.	Safety	
	Capping of boreholes and shaft, 6 ea. @ \$2,500.00 ea.	15,000.00
H.	Stabilization:	
	1. Reseeding 28.3 acres @ \$100.00/acre	2,830.00
	2. Fertilization 28.3 acres @ \$100.00/acre	2,830.00
	3. Mulching 28.3 acres @ \$100.00/acre	2,830.00
I.	Monitoring:	
	1. Continuing or periodic monitoring, sampling and necessary testing	15,000.00
SUBTOTAL		<hr/> \$132,875.00
J.	Contingency and Contractual Costs, 15%	19,931.00
		<hr/> \$152,806.00